Section 4-4: Proving Congruence: SSS, SAS

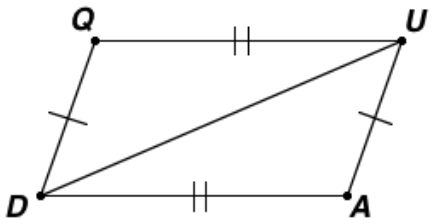
By the end of this lesson, you should be able to answer:
- How do you use the SSS Postulate to test for triangle congruence?
- How do you use the SAS Postulate to test for triangle congruence?

Define the following:
1. Included Angle

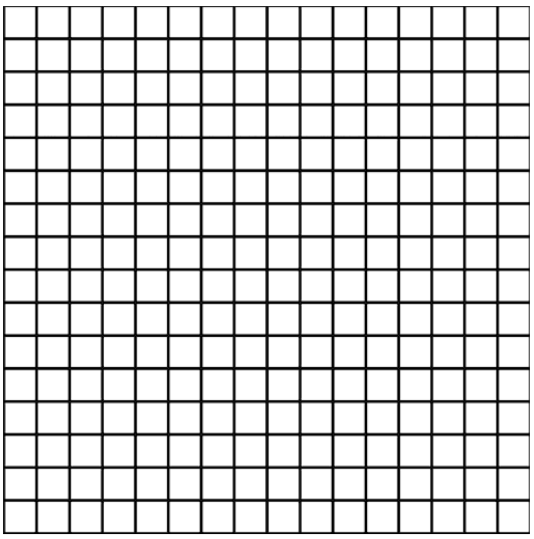
Postulate 4.1 - Side-Side-Side (SSS) Congruence

Postulate 4.2 - Side-Angle-Side (SAS) Congruence

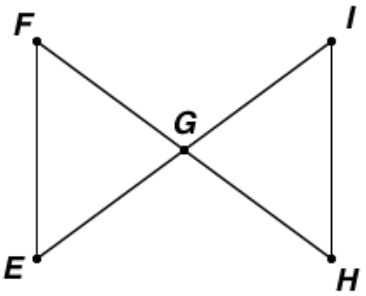
Example 1: Prove the following.
Given: $\overline{QU} \cong \overline{AD}$, $\overline{QD} \cong \overline{AU}$
Prove: $\triangle QUD \cong \triangle ADU$



Example 2: $\triangle DVW$ has vertices $D(-5, -1)$, $V(-1, -2)$, and $W(-7, -4)$. $\triangle LPM$ has vertices $L(1, -5)$, $P(2, -1)$, and $M(4, -7)$. Graph both triangles on the coordinate plane. Then, using your drawing, determine whether the triangles are congruent or not, providing a logical argument for your statement.



Example 3: Prove the following.
Given: $\overline{EI} \cong \overline{FH}$, G is the midpoint of $\overline{EI}$ and $\overline{FH}$
Prove: $\triangle FEG \cong \triangle HIG$



Problem Set:

"Doubt whom you will, but never yourself." - Christine Bovee